APPENDIX "A"

DATA NEEDS

AND

STANDARDS

SUMMARY

APPENDIX A - DATA NEEDS AND STANDARDS SUMMARY

Data Sets Required	Data needed to address questions in which portion of plan?	Action Type/ Question (May be more than one question per data set and questions may be repeated, requiring multiple data sets to answer.)	Existing / New Data (Note for each data set)	FGDC - Compliant Metadata Exists? (Note for each data set)	Data Std Status (Note for each data set)	Data Std Name (Note for each data set)	Data Meets Std? (Note for each data set)	For New Data, Proposed Method of Data Procurement or Conversion of Existing data (Note for each data set) From existing data, suggested source	Projected Costs (Note for each data set)
ADEQ air and water quality standards	Planning Criteria	Air and Water Quality Assessment	Existing	No	Standards established	Arizona DEQ Air and Water Quality standards	Yes	In-house - Compile ADEQ Standards and assess implications to BLM Management	$3,000
Abandoned Mine inventory	Bradshaw	On abandoned mine lands, how can we protect public safety and health while ensuring cultural and wildlife values are preserved?	Existing and new	Unknown	Standard Developed	Arizona State Mine Inspector Abandoned Mine Lands (AML) Data, Existing AMLIS data.	Yes	Contract and In-house, compile and digitize data	$5,000
Analysis of problems associated with previous R&PPs	Bradshaw	Should R&PP leases be granted in areas that contain significant cultural resources? If so, what measures are needed to ensure that these properties are protected or that potential impacts are mitigated?	Existing	No	No Standard	No Standard	No	In-house	$2,500
Assessment of current and future comm. site needs	Bradshaw	What lands will be made available for communication sites? Does current and future technology	Existing and new	No	No current Standard - will be determined through	No Standard	No	Contract - coordinate with telecom industry re: public lands needs for "Industry System"	$30,000

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Assessment of current and future comm. site needs		allow BLM to consider lands that have previously been closed due to visual impacts?			data collection contract				
Assessment of current and future needs for transportation and utility corridors	Bradshaw	What lands will be made available for transportation and utility corridors (Wickenburg Bypass/power lines and fiber/I-17)?	Existing and some new	No	No current Standard - will be defined in data collection contract	No Standard	No	Contract	$35,000
Back country road use effects on air quality (PM10 non-attainment)	Bradshaw	How will motorized and mechanical vehicles be managed to reduce or eliminate adverse effects to natural resources, while providing for a variety of focused, challenging, compatible and mechanized recreation opportunities?	New	No	No current Standard - will be defined in data collection contract	No standard	No	Contract research to analyze affects of activities on BLM land on Air Quality, esp. use of back country roads	$50,000

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Collect data on Heritage Tourism visitation rates	Bradshaw	How should we manage the increasing demand for heritage tourism by protecting sites while providing opportunities for public visitation and commercial tours? Are there areas that should be excluding from special recreation permitting?	Existing	No	No Standard	No Standard	No	In-house	$2,500
Community Partnerships	AFNM	▸ What can we do to help communities meet needs for expansion and economic development? ▸ Which archaeological sites should be allocated to scientific, recreational, educational and traditional uses? Which sites are	New	no		James Kent and Associates: "Human Geographic Units" "Seven Descriptors for Describing Communities"	yes	Combined contract and in-house	$230,000

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Community Partnerships		appropriate for development for interpretive use? ▸ What does the public want? ▸ How do we minimize potential conflicts between traditional uses (livestock grazing, hunting) and increased visitor use? ▸ How extensive is the illegal dumping problem and how can it be resolved? ▸ How can we work with the community to provide public services to visitors? ▸ How do we provide a safe and rewarding							

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Community Partnerships		recreational and educational experience while preserving the integrity of the cultural, scenic and biological resources? ▸ How can BLM develop an assertive public contact and environmental education program/outreach policy that will engage visitors, residents, elected officials, public agencies and private businesses? ▸ How do we protect sensitive habitat areas from conflicting uses? ▸ How can we identify and							

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Community Partnerships		develop specific management strategies for areas within the Bradshaws with high recreation values and recreation resources at risk? ► How will motorized and mechanical vehicles be managed to reduce or eliminate adverse effects to natural resources, while providing for a variety of focused, challenging, compatible and mechanized recreation opportunities? ► T&E and SSS - Where are							

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Community Partnerships		sensitive habitats? What activities conflict with management of these habitats? What can BLM do to conserve and recover sensitive species? ▸ What can we do to conserve and maintain existing wildlife habitats? ▸ How can we retain the rural western character of public lands while meeting urban interface needs? ▸ What level of visitor services and facility development is needed to meet recreation expectations of the public?							

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Community Partnerships		▸ What land should BLM withdraw from public land laws (Wickenburg fire station/BCT)? Prohibits mineral location, sales, or leasing, and disposal. ▸ How can we develop a partnership approach with others for long-term management? ▸ How can BLM develop an assertive public contact and environmental education program/outreach policy to visitors? ▸ How can we effectively manage the Black Canyon Trail?							

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Compile & digitize mineral index maps	Bradshaw	What/where are the present, past and future impacts of locatable mineral development?	Existing	Unknown	USGS Standard for Mineral Index Maps	USGS Mineral Index Maps	Yes	Contract compilation of USGS maps, or purchase from USGS	$6,500
Compile existing information on agency strategies for managing tours to protect sites	Bradshaw	How should we manage the increasing demand for heritage tourism by protecting sites while providing opportunities for public visitation and commercial tours? Are there areas that should be excluding from special recreation permitting?	Existing	No	No Standard	No Standard	No	In-house	$1,000
Compile protocol for assessing historic and wildlife habitat values of abandoned mines	Bradshaw	On abandoned mine lands, how can we protect public safety and health while ensuring cultural and wildlife values are preserved?	Existing	No	No Standard	No standard	No	In-house	$5,000

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Coordinate with other National Monuments (Canyon of the Ancients) to see how they handle this.	AFNM	How do we handle drop- in visitors?	Existing	No	No Standard	No Standard	No	In-house	$3,000
Coordinate with Tonto NF	AFNM	How will we manage Perry Mesa National Register District with Tonto NF?	Existing	No	No Standard	No Standard	No	In-house	$3,000
Coordination with Tonto NF and ADOT	AFNM	How can we work with the community to provide public services to visitors?	Existing	No	No Standard	No Standard	No	In-house compilation of Tonto plans and coord. With Tonto NF	$3,000
Cultural resource inventory - Primarily focused on areas of high risk and high probability of site occurrence	AFNM	▸ Do we want to restrict access to certain areas to protect resources? ▸ How can we monitor and reduce cultural vandalism? Which sites should be repaired or stabilized? Where are these	Existing and New	No	Standards established	Arizona SHPO Standards, Secretary of Interior's Standards, BLM Guidance in 8100 Manual and Handbooks, AZSite database standards, Arizona Site Museum site definitions	Yes	Contract	$70,000

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Cultural resource inventory - Primarily focused on areas of high risk and high probability of site occurrence	Bradshaw	needs most critical? ▸ How do we manage the Agua Fria River to preserve its Wild and Scenic River eligibility and associated resource values? ▸ What non-federal lands are needed to better manage Monument values? ▸ Which archaeological sites should be allocated to scientific, recreational, educational and traditional uses? Which sites are appropriate for development for interpretive use? ▸ Considering							

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Cultural resource inventory - Primarily focused on areas of high risk and high probability of site occurrence		urban expansion and other threats to their integrity, how should archaeological sites be allocated to scientific, public, and traditional uses? ▸ What measures are needed to protect cultural resources from vandalism, damage from OHV use and other uses, and natural deterioration? Where are these needs most critical? ▸ How will motorized and mechanical vehicles be managed to reduce or							

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Cultural resource inventory - Primarily focused on areas of high risk and high probability of site occurrence		eliminate adverse effects to natural resources, while providing for a variety of focused, challenging, compatible and mechanized recreation opportunities? ▸ What land will BLM retain in federal ownership for intensive/multiple use management? What lands will be available for disposal? What lands will be available for R&PP? What lands will BLM pursue for acquisition?Cultural resource inventory -							

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Cultural resource inventory - Primarily focused on areas of high risk and high probability of site occurrence		Primarily focused on areas of high risk and high probability of site occurrence. ► Where are the conflicts that will preclude or restrict mineral material sales? ► Should R&PP leases be granted in areas that contain significant cultural resources? If so, what measures are needed to ensure that these properties are protected or that potential impacts are mitigated?							

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Current wildlife habitat condition	AFNM	How do we minimize potential conflicts between traditional uses (livestock grazing, hunting) and increased visitor use?	Existing	No	Standards set in HMPs	Standards defined by Local Habitat Management Plans	Yes	In-house - compile and digitize existing habitat condition maps	$5,000
Data analysis - geologic & mineral assessments	Bradshaw	1. Where are the areas of past, present, and projected mineral development?	Existing	Yes	USGS Standards Developed	USGS Data Standards for Mineral Assessments	Yes	Contract compilation and digitizing, or purchase from USGS if in digital form	$6,500
Data on low income and minority communities (new census data)	Planning Criteria	Environmental Justice	Existing	Yes	Standards developed	U.S. Census Bureau Demographic Data Standards	Yes	In-house - acquire and analyze Census Bureau Demographic Data	$3,000
Database of Known Occupancies with information on hazmat	Bradshaw	To what extent are BLM lands being used for hazardous and non-hazardous trash dumping?	Existing and new	No	Standard not yet developed	Local standard for Occupancy Database including Hazmat info	Yes	Contract compilation of BLM data	$8,000

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Desert tortoise distribution inventory	Bradshaw	1. How do we protect sensitive habitat areas from conflicting uses? 2. What land will BLM retain in federal ownership for intensive/multiple use management? What lands will be available for disposal? What lands will	existing	No	Standard Developed	Arizona BLM GIS Standards for Desert Tortoise Habitat Category data	Yes	Complete	$0

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Dump inventory	AFNM Bradshaw	1. How extensive is the illegal dumping problem and how can it be resolved? 2. To what extent are BLM lands being used for trash dumping and how can this objectionable behavior be reduced or stopped? What public and environmental threat does the trash dumping pose?	Existing and new	No	Standard not yet developed	Local Standard for Inventory and characterization of illegal dumps on Public Lands	Yes	Contract compilation and entry of data. Contract or in-house GPS collection of known and recurring illegal dumping locations. Assessment of dump sites for potential hazardous material.	$8,000
Econ. Evaluation - leasable mineral market study	Bradshaw	What is the potential/demand for leasable mineral dev.?	existing	Unknown	Standard developed	USGS Leasable Mineral Market Study	Yes	Contract compilation & digitizing or purchase from USGS	$5,000

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Ecological Site Inventory (ESI) ESI	AFNM Bradshaw	1. How do we preserve integrity of the natural and cultural landscape? 2. How do we minimize potential conflicts between traditional uses (livestock grazing, hunting) and increased visitor use? 3. How do we maintain/improve wildlife habitat quality being encroached upon and fragmented? 4. What can we do to conserve and maintain existing wildlife habitats? 5. What is the appropriate level of management (what conditions	New	No	Standard Developed	BLM Standard for conducting Ecological Site Inventories	Yes	Contract for ~100,000 acres	$72,000

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Ethnographic Research	AFNM Bradshaw	1. What are tribal concerns relating to cultural resource management? How can tribal perspectives be incorporated into interpretive and educational materials? 2. Considering competing uses and threats to their integrity, what measures can be developed to protect sites, landmarks, or use areas that have sacred or other traditional importance to Native Americans?	Existing	No	No Standard	No Standard	No	In-house	$7,000
Fire effects	AFNM	How will we manage fire on the AFNM?	Existing	No	Standards Developed	Perry Mesa Prescribed Fire Plan	Yes	In-house compilation and digitizing	$6,000

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Ethnohistoric studies	AFNM Bradshaw	1. What are tribal concerns relating to cultural resource management? How can tribal perspectives be incorporated into interpretive and educational materials? 2. Considering competing uses and threats to their integrity, what measures can be developed to protect sites, landmarks, or use areas that have sacred or other traditional importance to Native Americans?	New	No	No Standard	No Standard	No	Contract	$15,000
Geologic maps	Bradshaw	1. What measures are needed to protect any	Existing	Unknown	Standard Developed	USGS Geologic Maps	Yes	Contract compilation and digitizing or Purchase from USGS if in digital form	$6,500

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Geologic maps		significant paleontological resources and allocate them to appropriate uses? 2. Where are the areas of past, present, and projected mineral development?. 3. Where are the areas of present and potential mineral material development?							
Grazing S and G evaluations Grazing S and G evaluations	AFNM	1. How do we manage the Agua Fria River to preserve its Wild and Scenic River eligibility and associoted resource values? 2. How do we minimize potential conflicts between traditional uses	New	No	Standard Developed	BLM Standards for conducting Allotment Assessments for Standards and Guidelines	Yes	Contract of 5 allotments	$120,000

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		(livestock grazing, hunting) and increased visitor use? 3. What non-federal lands are needed to better manage Monument values?							
Hazmat assessment (Richinbar property)	AFNM	1. How do we manage the Agua Fria River to preserve its Wild and Scenic River eligibility and associated resource values? 2. What non-federal lands are needed to better manage Monument values?	New	No	No Standard	No Standard	NO	Contract	$5,000
Heritage Fund survey by State Parks	Bradshaw	What level of visitor services and facility development is needed to meet recreation expectations of the public?	Existing	No	Standard Developed	Arizona State Parks Recreation Trends anSurvey needs s	Yes	In-house - compilation of survey results	$3,000

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Historic fire occurrence	AFNM	How will we manage fire on the AFNM?	Existing	No	Standard Developed	National Fire Center Standards for compiling and Describing Fire History	Yes	In-house - compilation and digitizing of fire history data - verification of current digital data	$10,000
Historic Resources overview of the Bradshaws	Bradshaw	Considering urban expansion and other threats to their integrity, how should archaeological sites be allocated to scientific, public, and traditional uses?	New	No	Unknown	Guidance in BLM Manuals	No	Contract or In-house (temporary hire)	$15,000
Info on seeding requirements	Bradshaw	What standards and guides do we need to set for reclamation?	Existing	No	No Standard	No standard	No	In-house review of reclamation reports	$1,500
Information from communities on possible future R&PP needs/desires	Bradshaw	Should R&PP leases be granted in areas that contain significant cultural resources? If so, what measures are needed to ensure that these properties are protected or that potential impacts are mitigated?	New	No	No Standard	No Standard	No	In-house review of current applications, Community Planning Documents, and coordination with City Planners.	$6,000

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Law enforcement agency partnerships	AFNM	How can we monitor and reduce cultural vandalism? Which sites should be repaired or stabilized? Where are these needs most critical?						in-house	$2,000
Leave no Trace organization	Bradshaw and Other Plans	How can BLM develop an assertive public contact and environmental education program/outreach policy that will engage visitors, residents, elected officials, public agencies and private businesses?	Existing	No	No Standard	No Standard	No	In-house - coordinate with "Leave No Trace" organization on possible cooperative efforts	$4,500
Legal research - research into law and case law relating to management of split estate lands	Bradshaw	Where are the split-estate lands and what is our responsibility/ authority in managing these lands?	Existing case law	No	No Standard	No standard	No	Contract (graduate student?) Research and compilation	$5,000

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Literature search & data analysis of previous reclamation efforts in similar environments	Bradshaw	What standards and guides do we need to set for reclamation?	Existing	No	No Standard	No Standard	No	In-house Review of BLM and National Resource Conservation Service (NRCS) Reports by someone with reclamation expertise.	$6,000
Locations for existing campgrounds, trail heads, trails, and other developments appropriate to retain and segregate from mineral development	Bradshaw	What land should BLM withdraw from public land laws (Wickenburg fire station/BCT)? Prohibits mineral location, sales, or leasing, and disposal.	Existing	No	Arizona State BLM Standards developed	Arizona BLM GIS Standards for Recreation sites (point and linear)	Yes	In-house decisions of appropriate data and review for completeness	$6,000
Location of existing mineral leases, permits, and claims.	AFNM	What valid existing mineral rights exist within the Monument and how will they be managed so that Monument values can be preserved while accommodating the existing rights?	Existing information, new to GIS	No	Arizona State BLM Standards developed	Arizona BLM GIS Standards for mining leases, permits, and claims.	Yes	Data must be compiles on maps and digitized. Estimate 2 work months for in-house compilation and digitizing.	$12,000

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Maps of split estate location - accurate surface and mineral ownership	Bradshaw	Where are the split-estate lands and what is our responsibility/ authority in managing these lands?	New	No	Standard Developed on 1:100,000 (LR 2000?, NILS?)	BLM Subsurface Management Maps Arizona Land Information system Standard Surface Ownership Data	Yes	Contract compilation and digitizing - compile using GCDB township data already in GIS	$24,000 Subsurface $24,000 Surface
Maps showing areas preferred by frequent customers (ADOT, MCDOT, etc.) for Mineral Material extraction.	Bradshaw	Where are the conflicts that will preclude or restrict mineral material sales?	Existing and new	Unknown	ADOT standard for Mineral Material Site locations	Arizona Department of Transportation and USGS Maps	Yes	Contract compilation and digitizing - or purchase if digital	$4,000
Maricopa County Eye to the Future 2020" open space report	Bradshaw	How can selected state and federal lands be linked (i.e. exchange, state preserved initiative, acquisition, easement) to provide recreation opportunity, open space and access?	Existing	No	No Standard	No Standard	No	In-house - compile information in report for analysis in plan	$1,500

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Mineral Material demand projections from county & city planners	Bradshaw	Where are the areas of present and potential mineral material development? What is the projected demand for mineral materials? Do we need community pits?	Existing	County general plans	Standards developed by county	Yavapai and Maricopa County General Plan - Sand and Gravel Demand	Yes	In-house compilation and digitizing. Data may be contained in the Arizona State Land Department Economic Evaluation	$3,000
Mineral occurrence maps - sand & gravel and landscape material	Bradshaw	Where are the areas of present and potential mineral material development? What is the projected demand for mineral materials? Do we need community pits?	Existing and new	Unknown	Arizona Dept. of Transp. Standard Developed	ADOT Mineral Material Source Maps, also derived from Geologic Maps	Yes	Contract compile and digitize, or purchase from ADOT if digital. Compile and digitize data from LR 2000. Derive from Geologic Maps.	$8,000
Mineral occurrence maps indicating: 1. Inactive - past production 2. Active - mining presently 2. Reserves - potential future development	Bradshaw	What/where are the present, past and future impacts of locatable mineral development?	Existing	Unknown	Arizona Standard Developed	Arizona Standard for Mineral Occurrence Maps (AZGS)	Yes	Contract compilation and digitizing or purchase	$6,500

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Mule deer, pronghorn, & elk distribution and population inventories	Bradshaw	What can we do to conserve and maintain existing wildlife habitats?	Existing	Yes	Arizona standard Developed	Arizona Game and Fish Department Wildlife Population data	Yes	In-house - Acquire from AG&FD	$1,500
Native American Consultations Native American Consultations	AFNM Bradshaw	1. What are tribal concerns relating to cultural resource management? How can tribal perspectives be incorporated into interpretive and educational materials? 2. What does the public want? 3. Considering competing uses and threats to their integrity, what measures can be developed to protect sites, landmarks, or use areas that have sacred or other	New	No	No standard	No Standard	No	In-house	$13,000

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		traditional importance to Native Americans?							
Native/exotic fish inventory - Fish species distribution inventory	Bradshaw	1. How can we carry out species recovery actions with conflicting activities occurring? 2. T&E and SSS - Where are sensitive habitats? What activities conflict with management of these habitats? What can BLM do to conserve and recover sensitive species?	Existing	No	Standard Developed	BLM Phoenix Field Office Fish Inventory Data	Yes	In-house compilation and digitizing	$3,000
Noxious weed inventory	Planning Criteria	Noxious weeds	New	No	Standard Developed	BLM Standard for Noxious Weed Inventory	Yes	Contract inventory, quantification, map & digitize	$30,000
Travel/Access route inventory	AFNM	1. Do we want to restrict access to certain areas to protect resources?	Existing - some additional data will	No	Local standard established , used	Arizona BLM Travel/Access route inventory Data Dictionary	Yes	Contract (Forest Service Enterprise team.) ($50,000 BLM, $75,000 from Arizona state Land	$50,000

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Travel/Access route inventory	Bradshaw	2. How do we minimize potential conflicts between traditional uses (livestock grazing, hunting) and increased visitor use? 3. How do we manage the Agua Fria River to preserve its Wild and Scenic River eligibility and associated resource values? 4. How can we monitor and reduce cultural vandalism? Which sites should be repaired or stabilized? Where are these needs most critical?	need to be collected for the plan in Summer 2002 (Skull Valley)		State wide.			Department.)	

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Travel/Access route inventory		5. What non-federal lands are needed to better manage Monument values? 6. Is adequate public access available? 7. Which archaeological sites should be allocated to scientific, recreational, educational and traditional uses? Which sites are appropriate for development for interpretive use? 8. How do we provide a safe and rewarding recreational and educational experience while preserving the integrity of the cultural, scenic							

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Travel/Access route inventory		and biological resources? 9. How can we identify and develop specific management strategies for areas within the Bradshaws with high recreation values and recreation resources at risk? 10. How should we manage the increasing demand for heritage tourism by protecting sites while providing opportunities for public visitation and commercial tours? Are there areas that should be excluding from special recreation permitting?							

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Travel/Access route inventory		11. How will motorized and mechanical vehicles be managed to reduce or eliminate adverse effects to natural resources, while providing for a variety of focused, challenging, compatible and mechanized recreation. 12. Considering urban expansion and other threats to their integrity, how should archaeological sites be allocated to scientific, public, and traditional uses? 13. On abandoned mine lands, how							

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Travel/Access route inventory		can we protect public safety and health while ensuring cultural and wildlife values are preserved? 14. T&E and SSS - Where are sensitive habitats? What activities conflict with management of these habitats? What can BLM do to conserve and recover sensitive species? 15. How do we protect sensitive habitat areas from conflicting uses? 16. What kinds of activities should be restricted and where to protect sensitive species and habitats?							

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Travel/Access route inventory		17. What land will BLM retain in federal ownership for intensive/multiple use management? What lands will be available for disposal? What lands will be available for R&PP? What lands will BLM pursue for acquisition? 18. What level of visitor services and facility development is needed to meet recreation expectations of the public? 19. What measures are needed to protect cultural resources from vandalism,							

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Travel/Access route inventory		damage from OHV use and other uses, and natural deterioration? Where are these needs most critical? 20. How can we retain the rural western character of public lands while meeting urban interface needs? 21. Where are the conflicts that will preclude or restrict mineral material sales? 22. What can we do to conserve and maintain existing wildlife habitats?							

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Analysis of roads and proximity to significant cultural sites. Analysis of proximity of all sensitive resources (T&E or SSS habitat, hazmat or other safety risks, etc.) to roads.	AFNM	Do we want to restrict access to certain areas to protect resources?	New	`No	No Standards being developed for products of analysis	No standard	No	In-house	$2,000
Oral history interviews	Bradshaw	Considering urban expansion and other threats to their integrity, how should archaeological sites be allocated to scientific, public, and traditional uses?	New	No	None	No Standard, use local standards	Yes	Contract	$5,000
Paleontological Resource Inventory	Bradshaw	What measures are needed to protect any significant paleontological resources and allocate them to appropriate uses?	Some New, some existing	No	Unknown	Applicable National Paleontological Inventory Standard	No	Contract compilation of annotated maps	$5,000
Planning by other govt. agencies and corporations (APS,	AFNM	▸ What can we do to help communities	New	No	None	None	No	In-house - to compile and digitize information	$18,000

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SRP, ADOT, Arizona State Lands, Arizona State Parks, Counties, Cities, Tonto NF, Prescott NF, etc.) Planning by other govt. agencies and corporations (APS, SRP, ADOT, Arizona State Lands, Arizona State Parks, Counties, Cities, Tonto NF, Prescott NF, etc.)	Bradshaw	meet needs for expansion and economic development? ▶ What land will BLM retain in federal ownership for intensive/multiple use. ▶ What lands will be made available for transportation and utility corridors (Wickenburg Bypass/power lines and fiber/I-17)? ▶ What land should BLM withdraw from public land laws (Wickenburg fire station/BCT)? Prohibits mineral location, sales, or leasing, and disposal.							

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Planning by other govt. agencies and corporations (APS, SRP, ADOT, Arizona State Lands, Arizona State Parks, Counties, Cities, Tonto NF, Prescott NF, etc.)		▸ What management strategies or resource allocation is needed to address growing demand for commercial recreation permits? ▸ What other agencies and/or communities are involved? What are their rolls? ▸ How can we eliminate conflicts between the planning goals of other agencies and ours? ▸ What can we do to help communities meet needs for expansion and economic development?							

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Range improvement inventory	AFNM and Bradshaw	How do we minimize potential conflicts between traditional uses (livestock grazing, hunting) and increased visitor use?	Existing and New	No	Standard Developed	Arizona BLM GIS Data Standards for Range Improvements (point & line)	Yes	In-house temporary hire ~6 wm & vehicles	$45,000
Regional economic assessment	Bradshaw	How can we meet the needs and desires of local communities for expansion and economic development?	Existing	No	Standard developed by other entities	Economic Assessment by Regional Planning Authority (Maricopa Association of Governments)	Yes	In-house - compile and analyze MAG Economic Assessment data	$4,500
Research on commercial tour management in other areas (i.e.: Sedona, Coconino NF and Tonto NF, BLM offices, etc.)	Bradshaw AFNM	1. What management strategies or resource allocation is needed to address growing demand for commercial recreation permits? 2. What, if any, level of commercial recreation permits should be issued?	Existing	No	No Standard	No Standard	No	In-house - compilation of strategies used by other offices	$4,500

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Research visual stipulations used in other areas by other entities to minimize visibility	Bradshaw	What lands will be made available for communication sites? Does current and future technology allow BLM to consider lands that have previously been closed due to visual impacts?	Existing	No	No Standard	No Standard	No	In-house - compilation of strategies used by other offices	$4,500
Review existing documentation and determine highest risk sites	Bradshaw	On abandoned mine lands, how can we protect public safety and health while ensuring cultural and wildlife values are preserved?	Existing	No	No Standards being developed for analysis products	No standard	No	In-house	$2,000
Review existing monitoring strategies and devices (including Site Steward Program.)	AFNM	How can we monitor and reduce cultural vandalism? Which sites should be repaired or stabilized? Where are these needs most critical?	Existing	No	No Standard	No Standard	No	in-house	$2,500
Review management document from Tonto NF	AFNM	How will we manage Perry Mesa National Register District with Tonto NF?	Existing	No	No Standard	No Standard	No	In-house	$2,000

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Review policies on disclosure of cultural site locations	AFNM	How do we handle drop- in visitors?	Existing	No	No Standard	No Standard	No	In-house	$1,000
Riparian inventory/PFC assessment Riparian inventory/PFC assessment	AFNM	1. How do we manage the Agua Fria River to preserve its Wild and Scenic River eligibility and associated resource values? 2. What non-federal lands are needed to better manage Monument values? 3. How do we maintain/improve wildlife habitat quality being encroached upon and fragmented? 4. What can we do to conserve and maintain existing wildlife habitats? 5. T&E and SSS - Where are	Existing	No	Standard Developed	BLM standard for Assessing Proper Functioning Condition of Riparian Areas	Yes	Complete	$0

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Riparian inventory/PFC assessment		sensitive habitats? What activities conflict with management of these habitats? What can BLM do to conserve and recover sensitive species? 6. What land will BLM retain in federal ownership for intensive/multiple use management? What lands will be available for disposal? What lands will be available for R&PP? What lands will BLM pursue for acquisition? 7. What is the appropriate level of management (what conditions							

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Riparian inventory/PFC assessment		we want) for wildlife habitat, riparian, special status species? (Desired future conditions) What do we need to do to get to DFC? 8. How will motorized and mechanical vehicles be managed to reduce or eliminate adverse effects to natural resources, while providing for a variety of focused, challenging, compatible and mechanized recreation opportunities?							
Recreation Opportunity Spectrum (ROS) inventory	AFNM	1. Do we want to restrict access to certain areas to protect resources?	New	No	Unknown, Mapping at 1:100,000	Recreation Opportunity Spectrum Inventory	No	In-house	$23,000

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Recreation Opportunity Spectrum (ROS) inventory	Bradshaw	2. What visitor services should be developed and where should they be? 3. How do we manage the Agua Fria River to preserve its Wild and Scenic River eligibility and associated resource values? 4. What non-federal lands are needed to better manage Monument values? 5. How do we provide a safe and rewarding recreational and educational experience while preserving the integrity of the cultural, scenic and biological resources?			scale or better, attributing consistent with Recreation Opportunity Spectrum Inventory guidance.				

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Recreation Opportunity Spectrum (ROS) inventory		6. How do we minimize potential conflicts between traditional uses (livestock grazing, hunting) and increased visitor use? 7. Is adequate public access available? 8. How can we identify and develop specific management strategies for areas within the Bradshaws with high recreation values and recreation resources at risk? 9. How will motorized and mechanical vehicles be managed to reduce or eliminate adverse effects to							

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Recreation Opportunity Spectrum (ROS) inventory		natural resources, while providing for a variety of focused, challenging, compatible and mechanized recreation opportunities? 10. What land should BLM withdraw from public land laws (Wickenburg fire station/BCT)? Prohibits mineral location, sales, or leasing, and disposal. 11. What land will BLM retain in federal ownership for intensive/multiple use management? What lands will be available for disposal? What lands will be							

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Recreation Opportunity Spectrum (ROS) inventory		available for R&PP? What lands will BLM pursue for acquisition? 12. What lands will be made available for communication sites? Does current and future technology allow BLM to consider lands that have previously been closed due to visual impacts? 13. What lands will be made available for transportation and utility corridors (Wickenburg Bypass/power lines and fiber/I-17)? 14. How can we retain the rural western character of public lands while							

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		meeting urban interface needs? 15. What standards and guides do we need to set for mine reclamation?							
Soil Survey - Order 3 inventory	Bradshaw Planning Criteria	1. How will motorized and mechanical vehicles be managed to reduce or eliminate adverse effects to natural resources, while providing for a variety of focused, challenging, compatible and mechanized recreation opportunities? 2. Conduct ESI	Existing	No	Standard Developed	National Resource Conservation Service (formerly Soil Conservation Service) Standards for Soils Line Digitizing.	Yes	Contract with NRCS or other source to compile and digitize	$30,000
Survey major resorts for client tours to determine future demand and trends	AFNM Bradshaw	1. What level of commercial recreation permits should be issued? 2. What management	Existing	No	No Standard	Standard will be developed in contract according to information needed for plan	Yes	Contract - develop survey and conduct interviews	$25,000

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		strategies are needed to address growing demand for commercial recreation permits?							
Threatened, Endangered, and Special Status Species habitat inventory	AFNM Bradshaw	1. Do we want to restrict access to certain areas to protect resources? 2. What visitor services should be developed and where should they be? 3. How do we maintain/improve wildlife habitat quality being encroached upon and fragmented? 4. How can we carry out species recovery actions with conflicting activities occurring? 5. How will	Existing	No	Standard developed by BLM & Arizona Game and Fish Dept.	Arizona Threatened, Endangered and Special Status Species Data	Yes	In-house compilation and digitizing	$6,000

Data Sets Required	Data needed to address questions in which portion of plan?	Action Type/ Question (May be more than one question per data set and questions may be repeated, requiring multiple data sets to answer.)	Existing / New Data (Note for each data set)	FGDC - Compliant Metadata Exists? (Note for each data set)	Data Std Status (Note for each data set)	Data Std Name (Note for each data set)	Data Meets Std? (Note for each data set)	For New Data, Proposed Method of Data Procurement or Conversion of Existing data (Note for each data set) From existing data, suggested source	Projected Costs (Note for each data set)
Threatened, Endangered, and Special Status Species habitat inventory		motorized and mechanical vehicles be managed to reduce or eliminate adverse effects to natural resources, while providing for a variety of focused, challenging, compatible and mechanized recreation opportunities? 6. T&E and SSS - Where are sensitive habitats? What activities conflict with management of these habitats? What can BLM do to conserve and recover sensitive species? 7. How do we protect sensitive habitat							

Data Sets Required	Data needed to address questions in which portion of plan?	Action Type/ Question (May be more than one question per data set and questions may be repeated, requiring multiple data sets to answer.)	Existing / New Data (Note for each data set)	FGDC - Compliant Metadata Exists? (Note for each data set)	Data Std Status (Note for each data set)	Data Std Name (Note for each data set)	Data Meets Std? (Note for each data set)	For New Data, Proposed Method of Data Procurement or Conversion of Existing data (Note for each data set) From existing data, suggested source	Projected Costs (Note for each data set)
Threatened, Endangered, and Special Status Species habitat inventory		areas from conflicting uses? 8. What kinds of activities should be restricted and where to protect sensitive species and habitats? 9. What land should BLM withdraw from public land laws (Wickenburg fire station/BCT)? Prohibits mineral location, sales, or leasing, and disposal. 10. What land will BLM retain in federal ownership for intensive/multiple use management? What lands will be available for disposal? What lands will be available for							

Data Sets Required	Data needed to address questions in which portion of plan?	Action Type/ Question (May be more than one question per data set and questions may be repeated, requiring multiple data sets to answer.)	Existing / New Data (Note for each data set)	FGDC - Compliant Metadata Exists? (Note for each data set)	Data Std Status (Note for each data set)	Data Std Name (Note for each data set)	Data Meets Std? (Note for each data set)	For New Data, Proposed Method of Data Procurement or Conversion of Existing data (Note for each data set) From existing data, suggested source	Projected Costs (Note for each data set)
Threatened, Endangered, and Special Status Species habitat inventory		R&PP? What lands will BLM pursue for acquisition? 11. What is the appropriate level of management (what conditions we want) for wildlife habitat, riparian, special status species? (Desired future conditions) What do we need to do to get to DFC? 12. Where are the conflicts that will preclude or restrict mineral material sales?							

Data Sets Required	Data needed to address questions in which portion of plan?	Action Type/ Question (May be more than one question per data set and questions may be repeated, requiring multiple data sets to answer.)	Existing / New Data (Note for each data set)	FGDC - Compliant Metadata Exists? (Note for each data set)	Data Std Status (Note for each data set)	Data Std Name (Note for each data set)	Data Meets Std? (Note for each data set)	For New Data, Proposed Method of Data Procurement or Conversion of Existing data (Note for each data set) From existing data, suggested source	Projected Costs (Note for each data set)
Taylor Grazing Act lands	Bradshaw	What land will BLM retain in federal ownership for intensive/multiple use management? What lands will be available for disposal? What lands will be available for R&PP? What lands will BLM pursue for acquisition?	Existing	No	Standard Developed	Standard used on Master Title Plats (MTP)	Yes	In-house - compile and develop data layer	$6,000

Data Sets Required	Data needed to address questions in which portion of plan?	Action Type/ Question (May be more than one question per data set and questions may be repeated, requiring multiple data sets to answer.)	Existing / New Data (Note for each data set)	FGDC - Compliant Metadata Exists? (Note for each data set)	Data Std Status (Note for each data set)	Data Std Name (Note for each data set)	Data Meets Std? (Note for each data set)	For New Data, Proposed Method of Data Procurement or Conversion of Existing data (Note for each data set) From existing data, suggested source	Projected Costs (Note for each data set)
Tread Lightly organization	Bradshaw Other Plans	1. How can BLM develop an assertive public contact and environmental education program/outreach policy that will engage visitors, residents, elected officials, public agencies and private businesses? 2. How can BLM develop an assertive public contact and environmental education program/outreach policy to visitors?	Existing	No	No Standard	No Standard	No	In-house - coordinate with "Tread Lightly" organization on possible cooperative efforts	$4,500
Update AZSite database	AFNM	1. Do we want to restrict access to certain areas to protect resources? 2. Which archaeological	Existing and New	No	Standard in place	AZSite database standard	Yes	Contract or in-house (temporary hire)	$5,000

Data Sets Required	Data needed to address questions in which portion of plan?	Action Type/ Question (May be more than one question per data set and questions may be repeated, requiring multiple data sets to answer.)	Existing / New Data (Note for each data set)	FGDC - Compliant Metadata Exists? (Note for each data set)	Data Std Status (Note for each data set)	Data Std Name (Note for each data set)	Data Meets Std? (Note for each data set)	For New Data, Proposed Method of Data Procurement or Conversion of Existing data (Note for each data set) From existing data, suggested source	Projected Costs (Note for each data set)
Update AZSite database	Bradshaw	sites should be allocated to scientific, recreational, educational and traditional uses? Which sites are appropriate for development for interpretive use? 3. Considering threats to their integrity, how should archaeological sites be allocated to scientific, public, and traditional uses?							
Update Hazmat Database	Bradshaw	To what extent are BLM lands being used for hazardous and non-hazardous trash dumping?	Existing and new	No	Standard developed	Local Hazmat Inventory Database standard	Yes	Contract compilation and digitizing of BLM data	$4,000

Data Sets Required	Data needed to address questions in which portion of plan?	Action Type/ Question (May be more than one question per data set and questions may be repeated, requiring multiple data sets to answer.)	Existing / New Data (Note for each data set)	FGDC - Compliant Metadata Exists? (Note for each data set)	Data Std Status (Note for each data set)	Data Std Name (Note for each data set)	Data Meets Std? (Note for each data set)	For New Data, Proposed Method of Data Procurement or Conversion of Existing data (Note for each data set) From existing data, suggested source	Projected Costs (Note for each data set)
Update leasable Mineral Potential maps	Bradshaw Planning Criteria	1. What is the potential/demand for leasable mineral development? 2. Identify lands available for mineral leasing	Existing	Unknown	Standard developed	USGS Standards for Mineral Potential Maps	Yes	Contract compilation and digitizing or purchase from USGS, needed statewide effort ~$75,000, estimate Bradshaw portion $15,000	$15,000
Update Perry Mesa vandalism study Compile vandalism reports submitted by site stewards and others	AFNM	1. How can we monitor and reduce cultural vandalism? Which sites should be repaired or stabilized? Where are these needs most critical? 2. Do we want to restrict access to certain areas to protect resources? 3. Which archaeological sites should be allocated to scientific, recreational, educational and	New information to existing study	No	Local Standard Developed	Perry Mesa Cultural Vandalism Study	Yes	Contract	$20,000

Data Sets Required	Data needed to address questions in which portion of plan?	Action Type/ Question (May be more than one question per data set and questions may be repeated, requiring multiple data sets to answer.)	Existing / New Data (Note for each data set)	FGDC - Compliant Metadata Exists? (Note for each data set)	Data Std Status (Note for each data set)	Data Std Name (Note for each data set)	Data Meets Std? (Note for each data set)	For New Data, Proposed Method of Data Procurement or Conversion of Existing data (Note for each data set) From existing data, suggested source	Projected Costs (Note for each data set)
Update Perry Mesa vandalism study Compile vandalism reports submitted by site stewards and others		traditional uses? Which sites are appropriate for development for interpretive use?							
Number and locations of current Special Recreation Permits (SRP), Visitor Statistics from current SRPs Above info analyzed in context of demand in Monument	Bradshaw AFNM	A. What management strategies or resource allocation is needed to address growing demand for commercial recreation permits? B. What management strategies or resource allocation is needed to address growing demand for commercial recreation permits? C. What kinds of activities should be restricted and where to protect	Existing	No	Standard Developed	Standards in RMIS and in guidance of Manuals, Handbooks	Yes	In-house - compile and, where appropriate, digitize	$6,000

Data Sets Required	Data needed to address questions in which portion of plan?	Action Type/ Question (May be more than one question per data set and questions may be repeated, requiring multiple data sets to answer.)	Existing / New Data (Note for each data set)	FGDC - Compliant Metadata Exists? (Note for each data set)	Data Std Status (Note for each data set)	Data Std Name (Note for each data set)	Data Meets Std? (Note for each data set)	For New Data, Proposed Method of Data Procurement or Conversion of Existing data (Note for each data set) From existing data, suggested source	Projected Costs (Note for each data set)
Number and locations of current Special Recreation Permits (SRP), Visitor Statistics from current SRPs		sensitive species and habitats? D. What, if any, level of commercial recreation permits should be issued?							
Visitor preference survey	AFNM	A. How do we minimize potential conflicts between traditional uses (livestock grazing, hunting) and increased visitor use? B. How do we provide a safe and rewarding recreational and educational experience while preserving the integrity of the cultural, scenic and biological resources? C. What does the public want? D. How will we	New	No	N o Standard - will be developed in contract	No Standard	Yes	Contract - develop survey, conduct interviews, conduct statistical analysis	$20,000

Data Sets Required	Data needed to address questions in which portion of plan?	Action Type/ Question (May be more than one question per data set and questions may be repeated, requiring multiple data sets to answer.)	Existing / New Data (Note for each data set)	FGDC - Compliant Metadata Exists? (Note for each data set)	Data Std Status (Note for each data set)	Data Std Name (Note for each data set)	Data Meets Std? (Note for each data set)	For New Data, Proposed Method of Data Procurement or Conversion of Existing data (Note for each data set) From existing data, suggested source	Projected Costs (Note for each data set)
Visitor preference survey		manage fire on the AFNM? E. Is adequate public access available?							
Visitor use statistics	AFNM	I. How do we minimize potential conflicts between traditional uses (livestock grazing, hunting) and increased visitor use? II. How do we provide a safe and rewarding recreational and educational experience while preserving the integrity of the cultural, scenic and biological resources?	New	No	None	None	No	In-house	$13,200
Visual Resource Management (VRM) inventory	AFNM	A. How do we provide a safe and rewarding recreational and educational	New	No	BLM National Standard being developed	BLM National Standard	No	In-house	$73,000

Data Sets Required	Data needed to address questions in which portion of plan?	Action Type/ Question (May be more than one question per data set and questions may be repeated, requiring multiple data sets to answer.)	Existing / New Data (Note for each data set)	FGDC - Compliant Metadata Exists? (Note for each data set)	Data Std Status (Note for each data set)	Data Std Name (Note for each data set)	Data Meets Std? (Note for each data set)	For New Data, Proposed Method of Data Procurement or Conversion of Existing data (Note for each data set) From existing data, suggested source	Projected Costs (Note for each data set)
Visual Resource Management (VRM) inventory	Bradshaw	experience while preserving the integrity of the cultural, scenic and biological resources? B. How do we preserve integrity of the natural and cultural landscape? C. What visitor services should be developed and where should they be? D. How can we retain the rural western character of public lands while meeting urban interface needs? E. How can we identify and develop specific management strategies for areas within the							

Data Sets Required	Data needed to address questions in which portion of plan?	Action Type/ Question (May be more than one question per data set and questions may be repeated, requiring multiple data sets to answer.)	Existing / New Data (Note for each data set)	FGDC - Compliant Metadata Exists? (Note for each data set)	Data Std Status (Note for each data set)	Data Std Name (Note for each data set)	Data Meets Std? (Note for each data set)	For New Data, Proposed Method of Data Procurement or Conversion of Existing data (Note for each data set) From existing data, suggested source	Projected Costs (Note for each data set)
Visual Resource Management (VRM) inventory		Bradshaws with high recreation values and recreation resources at risk? F. Where are the conflicts that will preclude or restrict mineral material sales? G. How can we effectively manage the Black Canyon Trail? H. What land will BLM retain in federal ownership for intensive/multiple use management? What lands will be available for disposal? What lands will be available for R&PP? What lands will BLM pursue for							

Data Sets Required	Data needed to address questions in which portion of plan?	Action Type/ Question (May be more than one question per data set and questions may be repeated, requiring multiple data sets to answer.)	Existing / New Data (Note for each data set)	FGDC - Compliant Metadata Exists? (Note for each data set)	Data Std Status (Note for each data set)	Data Std Name (Note for each data set)	Data Meets Std? (Note for each data set)	For New Data, Proposed Method of Data Procurement or Conversion of Existing data (Note for each data set) From existing data, suggested source	Projected Costs (Note for each data set)
Visual Resource Management (VRM) inventory		acquisition? I. What lands will be made available for communication sites? Does current and future technology allow BLM to consider lands that have previously been closed due to visual impacts? J. What lands will be made available for transportation and utility corridors (Wickenburg Bypass/power lines and fiber/I-17)? K. What standards and guides do we need to set for reclamation? L. What land should BLM withdraw from public land laws (Wickenburg							

Data Sets Required	Data needed to address questions in which portion of plan?	Action Type/ Question (May be more than one question per data set and questions may be repeated, requiring multiple data sets to answer.)	Existing / New Data (Note for each data set)	FGDC - Compliant Metadata Exists? (Note for each data set)	Data Std Status (Note for each data set)	Data Std Name (Note for each data set)	Data Meets Std? (Note for each data set)	For New Data, Proposed Method of Data Procurement or Conversion of Existing data (Note for each data set) From existing data, suggested source	Projected Costs (Note for each data set)
Visual Resource Management (VRM) inventory		fire station/BCT)? Prohibits mineral location, sales, or leasing, and disposal. M. What/where are the present, past and future impacts of locatable mineral development?							
Water quality inventory	AFNM	A. How do we manage the Agua Fria River to preserve its Wild and Scenic River eligibility and associated resource values? B. What non-federal lands are needed to better manage Monument values?	Existing and new	Yes	Standard Developed	Arizona Department of Environmental Quality (ADEQ) Standards for Water Quality Inventory ADEQ Waters At Risk	Yes	Contract water sampling and compilation	$12,000

Data Sets Required	Data needed to address questions in which portion of plan?	Action Type/ Question (May be more than one question per data set and questions may be repeated, requiring multiple data sets to answer.)	Existing / New Data (Note for each data set)	FGDC - Compliant Metadata Exists? (Note for each data set)	Data Std Status (Note for each data set)	Data Std Name (Note for each data set)	Data Meets Std? (Note for each data set)	For New Data, Proposed Method of Data Procurement or Conversion of Existing data (Note for each data set) From existing data, suggested source	Projected Costs (Note for each data set)
Water rights inventory	AFNM	What visitor services should be developed and where should they be?	Existing and new	No (May be with data from AZ. Department of Water Resources	Standard Developed for AZ DWR database, no standard for BLM assessment	Arizona Department of Water Resources Water Right Database	Yes	In-house review of database and assessment	$36,000
water source inventory/In-stream flow hydrology study	Bradshaw	A. How can we carry out species recovery actions with conflicting activities occurring? B. How do we maintain/improve wildlife habitat quality being encroached upon and fragmented? C. T&E and SSS - Where are sensitive habitats? What activities conflict with management of these habitats?	New (may be some existing)	No	Standard Developed	Arizona Department of Water Quality and BLM Standard for measuring in-stream flow and characterizing water sources	Yes	Contract	$288,000

Data Sets Required	Data needed to address questions in which portion of plan?	Action Type/ Question (May be more than one question per data set and questions may be repeated, requiring multiple data sets to answer.)	Existing / New Data (Note for each data set)	FGDC - Compliant Metadata Exists? (Note for each data set)	Data Std Status (Note for each data set)	Data Std Name (Note for each data set)	Data Meets Std? (Note for each data set)	For New Data, Proposed Method of Data Procurement or Conversion of Existing data (Note for each data set) From existing data, suggested source	Projected Costs (Note for each data set)
water source inventory/In-stream flow hydrology study	AFNM	What can BLM do to conserve and recover sensitive species? D. What can we do to conserve and maintain existing wildlife habitats? E. What visitor services should be developed and where should they be? F. How do we manage the Agua Fria River to preserve its Wild and Scenic River eligibility and associated resource values? G. What non-federal lands are needed to better manage Monument values?							
Wilderness inventory	AFNM	1. How do we manage the Agua	New (Wilderne	No	BLM National	BLM National Wilderness and	Existing	In-house	$77,000

Data Sets Required	Data needed to address questions in which portion of plan?	Action Type/ Question (May be more than one question per data set and questions may be repeated, requiring multiple data sets to answer.)	Existing / New Data (Note for each data set)	FGDC - Compliant Metadata Exists? (Note for each data set)	Data Std Status (Note for each data set)	Data Std Name (Note for each data set)	Data Meets Std? (Note for each data set)	For New Data, Proposed Method of Data Procurement or Conversion of Existing data (Note for each data set) From existing data, suggested source	Projected Costs (Note for each data set)
Wilderness inventory	Bradshaw	Fria River to preserve its Wild and Scenic River eligibility and associated resource values? 2. What are our current water rights and water needs to maintain the existing riparian corridor? (Under ground/above ground) 3. How can we identify and develop specific management strategies for areas within the Bradshaws with high recreation values and recreation resources at risk? 4. What level of visitor services	ss data exists, new inventory will be collected.)		Wilderness and Wilderness Study Area Data Standards developed	Wilderness Study Area Data Standards	data meets stand ard		

Data Sets Required	Data needed to address questions in which portion of plan?	Action Type/ Question (May be more than one question per data set and questions may be repeated, requiring multiple data sets to answer.)	Existing / New Data (Note for each data set)	FGDC - Compliant Metadata Exists? (Note for each data set)	Data Std Status (Note for each data set)	Data Std Name (Note for each data set)	Data Meets Std? (Note for each data set)	For New Data, Proposed Method of Data Procurement or Conversion of Existing data (Note for each data set) From existing data, suggested source	Projected Costs (Note for each data set)
Wilderness inventory		and facility development is needed to meet recreation expectations of the public? 5. Designate wilderness study areas 6. What Public Lands possess wilderness character as defined by section 2C of the Wilderness Act of 1964?							
Wildlife species distribution maps	AFNM Bradshaw	1. What visitor services should be developed and where should they be? 2. How do we maintain/improve wildlife habitat quality being encroached upon and fragmented?	existing	No (if digital, maybe)	Standards developed	Arizona Game and Fish Standards for Wildlife Distribution Data	Yes	In-house compilation and digitizing - or acquire from AZG&FD if already digital	$6,000

Data Sets Required	Data needed to address questions in which portion of plan?	Action Type/ Question (May be more than one question per data set and questions may be repeated, requiring multiple data sets to answer.)	Existing / New Data (Note for each data set)	FGDC - Compliant Metadata Exists? (Note for each data set)	Data Std Status (Note for each data set)	Data Std Name (Note for each data set)	Data Meets Std? (Note for each data set)	For New Data, Proposed Method of Data Procurement or Conversion of Existing data (Note for each data set) From existing data, suggested source	Projected Costs (Note for each data set)
Workload analysis as part of the Land Use Plan	Bradshaw	How can BLM develop an assertive public contact and environmental education program/outreach policy that will engage visitors, residents, elected officials, public agencies and private businesses?							
ADOT water use assessment - Sunset Point	AFNM	▸ What visitor services should be developed and where should they be? ▸ What are our current water rights and water needs to maintain the existing riparian corridor? (Under ground/above ground)	Existing	No	Standard developed by BLM and Arizona DWR for reporting water use	BLM and DWR standards for water usage reporting	Yes	In-house compilation of existing data	$3,000
								Total Estimated Data Collection costs	**$1,700,700**

ACTION TYPE/QUESTION - The question, or issue with a data requirement. (Pre-Plan Question/Issue from I.M. 2001-038)

DATA SETS REQUIRED - The specific data needs to support the ACTION/QUESTION.

EXISTING/NEW DATA - Is this existing data or new data yet to be collected or acquired?

FGDC - COMPLIANT METADATA EXISTS? - Does Metadata exist that is in compliance with the FGDC Geo-Spatial Metadata Content Standard?

DATA STANDARD STATUS - Is there an existing data standard, is one planned or underway? What kind of standard is it: has it been designated by BLM at the National, State, or Regional level?

DATA STANDARD NAME - If a data standard exists, what is its name?

DATA MEETS STANDARD? - If there is a standard, does/will the data meet that standard?

PROPOSED METHOD OF DATA PROCUREMENT OR CONVERSION - If new data, describe how the data will be obtained. If existing data will be converted to GIS or some other format, describe processing.

PROJECTED COSTS - Summary of costs associated with collecting or converting required data.

APPENDIX "B"

GIS

ACTION

PLAN

APPENDIX B - GIS ACTION PLAN

Data Sets Required	Data in PFO GIS? If so, is it adequate as is?	Is data in someone else's GIS? If so, is it adequate as is?	If data not in GIS format, does hard-copy (maps) exist? If so, is it adequate digitized as is?	Acquisition strategy including approximate work months needed.	Approximate Time Frame	Projected Costs (Note for each data set)
Abandoned Mine inventory	Yes - may be incomplete	Yes - Arizona Mine Inspectors Database, same as in our AMLIS		Data is recently acquired and must be verified. Some additional inventory may be necessary.	1 work month	$5,000
Assessment of current and future comm. site needs	No	Maybe - Some tele-communication companies use GIS	Maybe - Some data may be new collection.	Data collection, compilation and digitization by contract. Coordination will be needed with the tele-comm industry to determine what Public land sites might be needed to complete the "Industry System." Estimate data collection time of about 3 months, estimate total contract cost of $30,000.	3 work months	$30,000
ADEQ Air and Water Quality Standards	No	Maybe, ADEQ has "limited waters" data, may have air quality standards data as a spatial layer too.	Yes, with ADEQ	If ADEQ has digital data, acquire through ALRIS. If only hard copy, compile and digitize with in-house GIS technician.	.5 work month	$1,500
Assessment of current and future needs for transportation and utility corridors	No	Maybe - new county and city plans have GIS data.	Yes - County and City General Plans have some of this.	Data collection and compilation by contract. Contacts with ADOT, Maricopa County DOT, Yavapai County DOT, Cities in the planning area, and utility companies. Estimate data collection, compilation and digitizing will require approximately 3 months. Estimate total contract cost at $35,000.	3 work months	$35,000

Data Sets Required	Data in PFO GIS? If so, is it adequate as is?	Is data in someone else's GIS? If so, is it adequate as is?	If data not in GIS format, does hard-copy (maps) exist? If so, is it adequate digitized as is?	Acquisition strategy including approximate work months needed.	Approximate Time Frame	Projected Costs (Note for each data set)
Community Partnerships	No	No	No	Contract and in-house. Mapping data is a small component of this contract. Data collection, compilation, and digitizing will require about 3 work months.	3 work months	$18,000
Compile & digitize mineral index maps	No	Maybe - USGS Product	Yes - USGS Product	Purchase from USGS if available. Otherwise, contract compilation and digitizing of USGS maps.	1 work month	$6,500
Cultural resource inventory - Primarily focused on areas of high risk and high probability of site occurrence	No	Yes - in AZSite Database	Yes - all site information is retained on 7.5' quads in the Phoenix field office	Data in AZSite may be incomplete. Review of database will be required. Estimated inventory need on an additional 2500 acres. Contract inventory using GPS with a data dictionary reflecting SHPO/AZSite data collection standards. Estimated time for review, inventory, and any additional compilation ~6 work months.	6 work months	$70,000
Current wildlife habitat condition	No	No	Yes - Maps and data in HMPs	In-house - compile and digitize existing habitat condition maps. Estimate .75 work months	.75 work months	$5,000
Data analysis - geologic & mineral assessments	No	Maybe - USGS product	Yes - USGS product	Purchase from USGS if in digital form, otherwise compile and digitize by contract. Estimate 1 work month to complete this.	1 work month	$6,500
Data on low income and minority communities (new census data)	No	Yes - Census Bureau data in GIS format.		In-house - acquire and analyze Census Bureau Demographic Data	.5 work month	$3,000
Database of Known Occupancies with information on hazmat	No	No	Some maps exist in files, some additional field work needed.	Contract compilation and digitizing of BLM data. .5 work months in-house field work, .5 work months compilation and digitizing BLM data.	1 work months	$8,000
Desert Tortoise distribution inventory	Yes- Data satisfactory as is.				Complete	$0

Data Sets Required	Data in PFO GIS? If so, is it adequate as is?	Is data in someone else's GIS? If so, is it adequate as is?	If data not in GIS format, does hard-copy (maps) exist? If so, is it adequate digitized as is?	Acquisition strategy including approximate work months needed.	Approximate Time Frame	Projected Costs (Note for each data set)
Dump inventory	No	No	Some maps exist in files, some additional field work needed.	Contract compilation and digitizing of BLM data. .5 work months in-house field work, .5 work months compilation and digitizing BLM data.	1 work months	$8,000
Ecological Site Inventory (ESI) ESI	No	No	No	Contract for ~100,000 acres. 2 people for 2 months and 2 work months digitizing,	6 work months	$72,000
Ethnographic Research	No	Probably not	Probably not	Research involves literature review and interviews to determine tribal use patterns and the potential for important or sacred sites. Conducted in-house. Any mapping will be new. Estimate research and map compilation time at 1 work month @ $6,000 and miscellaneous travel and other expenses @ $1,000	1 work month	$7,000
Fire effects	No	No	Unknown	In-house compilation and digitizing. Existing vegetation maps are needed as a basis for defining and delineating effects of fire and on delineating fire regime boundaries. The new version of Gap Analysis vegetation may serve this purpose - must be acquired and verified. Estimate 1 work month.	1 work month	$6,000
Ethnohistoric studies	No	Probably not	Probably not	Contract studies. Mapping will be new data and estimate compilation and digitizing will take approximately 1 work month.	1 work month	$15,000
Geologic maps	Yes, but at 1:1,000,000 - Not adequate for this plan	Maybe - USGS product	Yes - USGS Product	Purchase from USGS if in digital form if available. If not, contract compilation and digitizing. Will require about 1 wm.	1 work month	$6,500

Data Sets Required	Data in PFO GIS? If so, is it adequate as is?	Is data in someone else's GIS? If so, is it adequate as is?	If data not in GIS format, does hard-copy (maps) exist? If so, is it adequate digitized as is?	Acquisition strategy including approximate work months needed.	Approximate Time Frame	Projected Costs (Note for each data set)
Grazing Standard and Guideline evaluations	No	No	NO	Contract of 5 allotments in Agua Fria National Monument.	10 work months	$120,000
Historic fire occurrence	Yes - but data is incomplete and not very accurate	Yes - Similar to what we already have, but more up-to-date. Old data not accurate.	Yes - Fire reports are kept on file for a long time. Most should be in Dispatch.	In-house - compilation and digitizing of fire history data - verification of current digital data. Estimate 2 work months.	2 work months	$12,000
Historic Resources overview of the Bradshaws	No	No	Some may. Most mapping will be new.	Contract or temporary hire. Estimate 3 work months @ $4,000 = $12,000, vehicle for 2 months @ $500 = $1000, Travel and miscellaneous expenses $2000.	3 work months	$15,000
Information from communities on possible future R&PP needs/desires	No	No	No	In-house coordination with community planners concerning community growth plans and future R&PP proposals. Compilation of possible application areas and digitizing ~1 work month.	1 work month	$6,000
Law enforcement agency partnerships	No	No	No	Data is primarily non-spatial, except may be supported by a map showing the legal jurisdiction of various law enforcement agencies, and a map showing agreed upon patrol and enforcement boundaries as a result of the partnership. In-house compilation and digitizing ~ .25 work month	.25 work month	$2,000
Locations for existing campgrounds, trail heads, trails, and other developments appropriate to retain and segregate from mineral development	Yes - may be incomplete	No	Yes	In-house decisions of appropriate data and review for completeness. ~1 work month	1 work month	$6,000

Data Sets Required	Data in PFO GIS? If so, is it adequate as is?	Is data in someone else's GIS? If so, is it adequate as is?	If data not in GIS format, does hard-copy (maps) exist? If so, is it adequate digitized as is?	Acquisition strategy including approximate work months needed.	Approximate Time Frame	Projected Costs (Note for each data set)
Location of existing mineral leases, permits, and claims.	No	No	Some data is mapped, but most data exists as plats and legal description lists. Most not in a digitizable format.	In-house compilation of data to maps. Digitizing by in-house GIS technician or contract.	2 work months	$12,000
Maps of split estate location - accurate surface and mineral ownership	Surface ownership in GIS at 1:100,000 scale. May not be adequate for this plan. No subsurface ownership	No	Yes. The data is available on Master Title Plats. GCDB has accurate mineral surveys and Public Land Survey System (PLSS) lines.	For data of acceptable accuracy, GCDB PLSS should be used as a digital base for compilation. Master Title Plats (MTP) should be used as the source document for determining ownership. This work would be township by township over the planning area. It is estimated that it would require 4 work months for each data layer (Surface ownership and mineral ownership) for a total of 8 work months.	8 work months	$24,000 mineral ownership $24,000 Surface ownership
Maps showing preferred areas for Mineral Material development	No	Maybe - ADOT and USGS may have source data.	YES - ADOT and USGS should have necessary maps	Purchase if in GIS format. Otherwise, contract compilation of maps from USGS and ADOT. Approximately .5 work month. May be able to derive some potential source deposits from Geologic Maps.	.5 work month	$4,000
Maricopa County Eye to the Future 2020" open space report	No	No	No	In-house - compile information in report for analysis in plan. - Estimate 1 work week	.25 work months	$1,500

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Metadata collection for existing and new data	No	Some exists, most meets FGDC Standards	NA	BLM accepted metadata tool will be acquired. All existing data will be assessed for metadata needs. A strategy will be developed for storing and managing metadata. Data acquired from other sources will be handled by inquiry to the data source for metadata files. Local data will have metadata developed using metadata tool and research into data history. Metadata will be compiled in-house and will require approximately 2 workmonths and the cost of the metadata tool. Estimate metadata tool cost $2,000	2 work months @$2,874 + $2,000 =	$7,748
Mineral Material demand projections from county & city planners	No	Maybe - recent city plans have GIS data	Yes - data available from planning shops.	Acquire digital data if available. If not, acquire hard copy maps. In-house compilation and digitizing. Estimate .5 work months if data readily available. Data may be contained in the Arizona State Land Department Economic Evaluation	.5 work months	$3,000
Mineral occurrence maps - sand & gravel and landscape material	No	Maybe - however, may be incomplete	ADOT has some data near highways. Other sources will need to be sought. LR 2000 is a source for current BLM locations.	Acquire ADOT data. Contact Yavapai and Maricopa County DOT for information. Other sources as appropriate. Contract compile and digitize. Acquire and digital data available. Compilation could take from 1 week to 1 month. Compile and digitize LR 2000 data.	2 work month	$8,000

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Mineral occurrence maps indicating: 1. Inactive - past production 2. Active - mining presently 2. Reserves - potential future development	No	Maybe - AZGS product	Yes - AZGS Digital non-spatial data in LR 2000	Purchase if already in GIS format. Otherwise contract compilation and digitizing. Compilation and digitizing of LR 2000 data also.	2 work month	$13,000
Mule deer, pronghorn, & elk distribution and population inventories	No	Yes - AG&FD may have data	Yes - AG&FD Maps	Acquire from Arizona Game & fish Department if available. Otherwise, acquire maps and compile and digitize in-house.	.5 work months	$1,500
Native/exotic fish inventory - Fish species distribution inventory	No	No	Yes	In-house compilation and digitizing.	.5 work months	$3,000
Noxious weed inventory	No	No	No	Contract inventory, quantify, map, and digitize noxious weed locations.	4 work months	$30,000
Travel/Access route inventory	Yes - incomplete, some additional data will need to be collected for the plan in Summer 2002 (Skull Valley)	Yes - will share our data with Arizona State Lands and State Parks	No	Contract (Forest Service Enterprise team.) ($50,000 BLM, $75,000 from Arizona state Land Department.)	6 work months	$50,000

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Analysis of roads and proximity to significant cultural sites. Analysis of proximity of all sensitive resources (T&E or SSS habitat, hazmat or other safety risks, etc.) to roads.	Some - Roads and routes data being acquired now. Some of the sensitive sites may be in GIS, others not and may be noted in this table.	Some - Cultural sites in AZSite		This is the product of analysis with two or more other data sets. The elements of the data sets considered sensitive must be selected separate from the rest. Than a simple proximity analysis can be run. This is an in-house process requiring about 1 week for identification of the sensitive sites, and about 10 minutes for the analysis.	.25 work months	$2,000
Oral history interviews	No	No	Probably not. New mapping may be necessary.	Contract interviews. Locations of historically important sites will be mapped and digitized. Estimate 1 work month for whole project. Map compilation and digitizing ~ .25 work months.	.25 work months	$5,000
Paleontological Resource Inventory	No	Maybe - is a USGS Product	Yes - USGS has data	Contact USGS and see if GIS version available. If not: Contract compilation & digitizing ~.5 work months	.5 work months	$5,000
Planning by other govt. agencies and corporations (APS, SRP, ADOT, Arizona State Lands, Arizona State Parks, Counties, Cities, Tonto NF, Prescott NF, etc.)	No	Maybe - some newer community plans have GIS data.	Yes - maps are in county and community plans.	In-house - Acquire what GIS data we can. Compile and digitize information from plan maps. Estimate ~3 work months	3 work months	$18,000

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Range improvement inventory	Partial inventory - Accuracy only verified on some allotments	No	Some - some improvements in files	In-house temporary hire. GPS verification of existing data and collection of new data. 6 work months, vehicles, travel, miscellaneous.	6 work months	$45,000
Review existing documentation and determine abandoned mines at highest risk as hazards to public or for hazmat.	Yes - though may be incomplete			Review existing maps and files, perform analysis for proximity to popular roads, identify high risk sites. Estimate .5 work months.	.5 work months	$2,000
Riparian inventory/PFC assessment	Yes - Data complete				Complete	$0
Recreation Opportunity Spectrum (ROS) inventory	No	No	No	In-house data compilation and analysis. GIS data analysis and field verification. 1 person for 3 work months @ ~$6,000 = $18,000. Travel and miscellaneous expenses ~$5,000	3 work months	$23,000
Soil Survey - Order 3 inventory	No	Partial	Yes	Two soils surveys cover the planning area. One is being digitized by NRCS now and should be complete soon. The Yavapai County survey isn't planned for digitizing for a long time and won't be done in time unless we pay for the compilation and digitizing. Estimate 5 months for compilation and digitizing	5 work months	$30,000

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Threatened, Endangered, and Special Status Species habitat inventory	Some - data incomplete	Maybe - US Fish and Wildlife Service may have some, Arizona Game and Fish Department	Most	Most data exists. Compile and digitize in-house. Estimate 1 work month.	1 work month	$6,000
Taylor Grazing Act lands	Some - surface ownership available	No	No	In-house - compile and develop data layer. Use surface ownership as the basis to compile Taylor Grazing Lands onto from Master Title Plats. Estimate 1 work month to complete.	1 work month	$6,000
Update AZSite database	No	No	Yes - maps and data input forms are in PFO files.	Some new data has been collected since last database update. Estimate approximately 1 work month input time. Use contract if available, or temporary hire.	1 work month	$5,000
Update Hazmat Database	No	No	Some exist in BLM files. Some additional field work needed.	Contract compilation and digitizing of BLM data. .25 work months in-house field work, .25 work months compilation and digitizing BLM data.	.5 work months	$4,000
Update Mineral Potential maps	No	Maybe - USGS product.	Yes - USGS Product	Purchase from USGS if available in GIS format. Otherwise, needed statewide effort ~$75,000, estimate Bradshaw portion $15,000. Estimate 10 work months for statewide effort, 3 for Bradshaw portion.	3 work months	$15,000
Update Perry Mesa vandalism study Compile vandalism reports submitted by site stewards and others	No	No	Yes - but data is old.	Contract inventory and review of Site Steward reports to update Perry Mesa Vandalism Study. Estimate 3 work months.	3 work months	$20,000

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Number and locations of current Special Recreation Permits (SRP), Visitor Statistics from current SRPs	Some - some Commercial permits are digitized. Incomplete coverage.	No	Yes - Locations are mapped in case files.	In-house - compile and digitize locations of Special and commercial recreation permits. Code appropriate statistics into database associated with GIS data. Estimate 1 work month	1 work month	$6,000
Visitor use statistics	No	No	No	Visitor use is usually collected as non-spatial. For planning purposes, spatial representation of statistical data is very useful. Estimate in-house mapping and digitizing of visitor use ~ 1 work week.	.25 work month	$13,200
Visual Resource Management (VRM) inventory	No	No	No	VRM Inventory according to manual procedures. 2 people ~5 months = 10 Work months, vehicles @ $500 per month = $5,000, travel and miscellaneous expenses ~$2,000. Data compilation, digitizing and GIS support ~ 1work month.	11 work months	$73,000
Water quality inventory	Some - ADEQ limited waters	Maybe - ADEQ may have more information	Some - Data is incomplete.	Compile and verify existing data and collect for waters not previously tested. Contract water sampling and data compilation - estimate $12,000.	2 work months	$12,000
Water rights inventory	Some - DWR database. May be incomplete	Maybe - DWR database may have info we need	Yes - data exists in hard copy	In-house compilation and digitizing of existing data. Estimate 6 work months.	6 work months	$36,000

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In-stream flow hydrology study	No	No	Some	Some data exists, but most must be collected from inventory. Estimate Contract cost at $144,000.	12 work months	$144,000
water source inventory	No	No	Some	Some data exists, but most must be collected from inventory. Estimate Contract cost at $144,000.	12 work months	$144,000
Wilderness inventory	No	Some - Road and route inventory. Land ownership data	No	In-house inventory. GIS analysis or road and route inventory for initial inventory units 1 work month ($6,000) 2 people in field for suitability inventory for ~4 months = 8 work months, Helicopter time ~$11,000, Misc. ~$4,000, travel ~$4,000, Vehicles ~$4,000.	5 work months	$77,000
Wildlife species distribution maps	No	Maybe - in AG&FD database	Yes	If data unavailable from Game and Fish, compile and digitize in-house.	1 work month	$6,000
					Work Months	Dollars
				Total work months and Estimated Data	155.5	$1,318,948